

## Attachment 8. Quality Assurance

Quality Assurance and Quality Control (QA/QC) is a core function of how HydroScience Engineers (HSe) delivers projects. QA/QC is a key factor in delivering a product that meets the needs of the client and providing a product that everyone can stand behind and justify.

Major deliverables will receive an independent internal QA/QC review before submittal to the District. The QA/QC review will follow the procedures documented in HSe's Project Management Plan, which include checks for accuracy and completeness, clarity, and verification of content, calculation, and presentation. QA/QC comments will be documented and can be presented to the District at their request. Every submittal will have completed this QA/QC process.

For this project, key QA/QC considerations to meet the project objectives will be a strong understanding of the local acceptance and feasibility of using recycled water for groundwater recharge. Major elements of the QA/QC process for this project are as follows: 1) aggressive public outreach; 2) experienced professional team; and 3) internal procedures to integrate the professional viewpoints of the different team members and their respective areas of expertise and provide feed back for an adaptive approach to project management.

**Aggressive public outreach:** Early and frequent outreach events with the agricultural community (Landowners/Growers) and general public are essential. Agriculture is the major extractor of groundwater in the basin, with estimated annual usage of approximately 90,000 AFY of groundwater. Therefore, the agricultural community's acceptance of recycled water is critical if it is to be used to recharge the groundwater basin. Building agricultural and general community confidence and buy-in to the use of recycled water must be an open process to avoid the public perception of decisions being made without their input.

**Experienced professional team:** Having a highly qualified team with significant experience in recycled water master planning, agricultural irrigation demands and practices, and public outreach is essential. Recognizing this need, the team is comprised of individuals from three firms, each with unique talents applicable to this project. HSe has extensive experience in recycle water master plans, wastewater treatment, and water modeling. Robertson-Bryan (RBI) has extensive experience with agriculture operations, environmental assessments, regulatory issues, and biological resources. Buethe Communications is a local firm specializing in public outreach in the San Joaquin County area. Together, this team is very well qualified to execute the Work Plan. The Organization Chart (attached) shown reflects this understanding of the key technical elements of this project and the need for an experienced and highly qualified team. A short biography of the key team members is included in the last section.

**Internal procedures:** QA/QC procedures will include of internal review of all documents and public outreach efforts prior to submitting each deliverable, and team coordination of messaging prior to public meetings and public outreach efforts. This QA/QC will be centered around providing accurate, clear, concise, and transparent information at all times so that all the messages are clearly interpreted by all parties. This QA/QC will be performed by the principal-in-charge for the Consultant.

Additionally, the deliverables will require the input and support of the proposed users of recycled water: the public and the agricultural community. Early and frequent outreach to the public and agriculture community will allow the Consultant to tailor deliverables to meet the needs and requirements of the constituents. Input from the community will also be a key component of the QA/QC process to ensure that the outcomes of the Study meet the needs of the community.

## **Team Bios**

A wide range of qualified team professionals will conduct the Study, as shown in the Organization Chart (attached). A short biography for individual members of the team is listed below.

**Walt Sadler (Project Manager for the District).** Walt is the General Manager for the District and will manage the Study for the District. Walt has over 40 years of experience of water and wastewater engineering experience in the Sacramento region. Walt previously worked the City of Folsom as a Principal Engineer and was responsible for overseeing their utilities program and has worked as a professional engineer in the private industry for firms such as Brown and Caldwell, Boyle, and CDM Smith.

**Curtis Lam (Principal at HydroScience Engineers).** Curtis will manage the development of the Study and public outreach efforts. Curtis has 18 years of experience as a civil engineer, and primarily works on water, wastewater, and recycled water projects. Curtis specializes in recycled water projects, and has overseen the preparation of recycled water studies in San Jose, Watsonville, Roseville, Novato, Sunnyvale, Oakland, and Vacaville.

**Michelle Trinh (Project Manager at HydroScience Engineers).** Michelle will be responsible for the day-to-day project management of the project. Michelle recently led the efforts of HSe to complete a Title XVI feasibility study to develop recycled water projects in Santa Clara County, and has worked with Curtis on many recycled water projects.

**Angela Singer (Project Engineer at HydroScience Engineers).** Angela Singer will be the lead engineer for the recycled water market assessment. With eleven years of experience working on recycled water, water, and wastewater projects throughout California, Angela brings a wealth of planning experience to the Consultant team. Currently, Angela is managing a recycled water master plan for the City of Sunnyvale.

**Kyle Horn (Distribution System Lead at HydroScience Engineers).** Kyle Horn will be the lead engineer for the recycled water distribution system evaluation. Kyle has significant experience working on various recycled water, water, and wastewater projects at HSe, with an emphasis on pipeline design, hydraulic modeling, and recycled water customer connections.

**Judith Buethe (Public Outreach).** Judith Buethe has worked as a public outreach and communications manager in the San Joaquin Valley for many years. She is familiar with the local issues and major parties involved in the District, farming community, and regulatory agencies. Judith's expertise is key in making sure that the District and consulting engineers provide appropriate public outreach to the farmers and public about groundwater recharge and recycled water. She will work closely with HSe to develop an outreach strategy and to ensure that the farmer's and public's concerns are addressed throughout the Study.

**Art O'Brien (Robertson-Bryan, Inc.).** Art is a civil engineer with over 33 years of civil engineering planning, design, and construction experience. Previously, Art managed utilities for the City of Roseville, and was responsible for providing fiscal, project, and staff leadership and preparing training programs to improve delivery of services to public agencies. He is a regular speaker and presenter at professional society meetings and community workshops, such as WEFTEC, California Water Environment Federation, and Central Valley Clean Water Association.

**Stuart Robertson (Robertson-Bryan, Inc.).** Stuart Robertson is a registered Civil Engineer with 32 years of experience in planning, design, and implementation of water and power resource systems. Water resources expertise include Sacramento-San Joaquin Delta hydrology and operating standards, water transfer analyses, conjunctive use of surface and groundwater supplies, and flood hydrology and hydraulics. Stuart represents over 26 water purveyors associated with the U.S. Department of Energy, Western Area Power Administration, including election to the Governance Board for the operation and maintenance of power facilities in the Central Valley Project that oversees an \$85 million annual budget.

**Janelle Nolan (Robertson-Bryan, Inc.):** Janelle Nolan has more than 18 years of experience in environmental consulting and has a strong background in project management and preparation of CEQA and NEPA documents. She has managed the preparation of numerous environmental documents for municipal, private, state, federal, and local agencies. Janelle has a thorough understanding of environmental regulatory requirements, as well as solid working knowledge of both natural and built environmental resources and experience with project permitting. Ms. Nolan has an in-depth knowledge and understanding of the regulatory processes and permitting requirements for the federal and state endangered species acts and has established working relationships with agency representatives.